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ABSTRACT

This brief focuses on student attrition and retention in the two-year college. An introductory section discusses the definitions of attrition used in studies of student persistence; and how these definitions, which often include students who are actually completers in terms of their own educational goals, may exaggerate attrition rates, which are reported in the literature to range from 20.9% to 70.5%. Studies indicate that dropouts tend to be part-time students, vocational/technical or business majors, members of ethnic minorities, older students, women, and Protestants. Research studies have also addressed the reasons for attrition and tried to determine possible solutions to the problem. The remainder of the brief presents an annotated bibliography on attrition and retention consisting of published and unpublished materials from the ERIC files divided into six sections: general works on and definition of attrition/retention; findings from the colleges; programs and methods of reducing attrition; special groups of students and attrition; withdrawal from courses; and methodology and use of follow-up studies. (MB)

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ABOUT STUDENT ATTRITION/RETENTION IN THE COMMUNITY COLLEGE

A Brief highlighting literature since 1973
on community college student attrition/retention.

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This Brief focuses on student attrition and retention in the two-year college. It consists of six sections: General Works on and Definition of Attrition/Retention; Findings from the Colleges; Programs and Methods of Reducing Attrition; Special Groups of Students and Attrition; Withdrawal from Courses; and Methodology and Use of Follow-up Studies. This literature review is based on references to both published and unpublished materials from a variety of sources, including books and journals in the field, and the files of the ERIC system.

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Introduction

Attrition usually refers to students who do not complete the courses for which they enroll in a particular term or who do not enroll for the next term. Withdrawal from all courses or noncontinuation from one term to the next is frequently associated with the label "dropout." Withdrawal from a single course is also of concern to educators. Although some studies interchange terms, "dropout" typically denotes the non-persister or student who does not systematically progress toward a goal as defined by institutions, while "withdrawal syndrome" refers to students who drop out from only one course.

Attrition/retention studies attempt to identify factors which predict student persistence/attrition and success or failure. There are many more studies in which attrition/retention is part of a broader spectrum or only one phase of the effort to trace the flow of students through the educational process and follow-up on their activities after leaving institutions. Few authors analyze the implications of their findings--probably because the assumption that dropouts represent failure and persistence equals success appears axiomatic.

The Problem

Attrition rates reported in the recent literature range from 20.9 to 70.5 percent. In one study the statewide average was 48 percent (with a range from 30 to 56 percent). The problem for educators who note high attrition rates is how to reduce them. Recognizing that factors exist over which the institution has little control does not assuage the devastation to instructors whose students drop out nor appease boards of trustees who, in a time of increasingly stringent fiscal constraints, are concerned about costs of recruitment, admission evaluation and other services for a constantly changing body of students--particularly in an era of declining enrollment pools of "traditional" students. Strategies which could affect retention statistics such as concentrating on recruitment of those students whose characteristics are similar to proven persisters are clearly unacceptable on other educational grounds.

Surprisingly little concern is expressed about the community college's raison d'être--the students themselves. What difference colleges make to the students they serve is frequently not discussed in the literature on community college student persistence/attrition. Nevertheless, a major California study asserts that "The concept of non-persistence does not imply failure on the part of the students or the colleges."

Distress Regarding High Dropout Rates May Be Exaggerated

Colleges tend to treat as non-persisters those students who do not reenroll at the same campus for the following term. Yet studies reveal that, in fact, 3 to 12 percent of these former students had graduated. Additional students counted as dropouts had transferred to other two- or four-year institutions.

Some investigators do attempt to analyze persistence in relationship to the goals of students. The California study Through the Open Door recognized "the concept that many students who terminate their enrollment during the first year are in fact 'completers' whose objectives encompassed only one or two courses." Not all institutions appear to accept the validity of such "limited" aims, emphasizing instead completion of degree, transfer, or certificate programs as their criterion for completion. The extent to which "dropouts" are actually "completers" merits further study. While two-thirds of a sample of early leavers at a college in the mid-West reported that they had achieved their stated purpose at the college, a California college study indicated that 60 percent of the students withdrew before meeting their objectives (although one-third of them later reenrolled). It is not clear how much of the difference reported from these colleges reflects methodology or actual variance in extent of satisfaction. Obtaining reliable information regarding student goals is not always easy. Information from college records may represent forced choices of which none is congruent with the student's actual purpose. Questions regarding intent may be asked before the student has had the opportunity to refine his or her educational goals. Objectives may change over time so that follow-up study participants may be unable to recall accurately their original purpose. Institutions participating in a California study of persistence/attrition reported such data obtained from student records, but many felt that their information might well be invalid. If the true goals of students were taken into consideration, the dropout problem could be placed in better perspective.

The extent to which students treated as "dropouts" are actually "stopouts" also deserves attention. Continuous enrollment may be a luxury for students who nevertheless persevere toward an objective on an intermittent basis.

Students counted as non-returners in follow-up studies often report a high degree of satisfaction with their educational experiences at the colleges they leave. They also indicate they plan to return. Refinement of strategies to facilitate reenrollment of these students may be in order.

Who is the Dropout Student?

According to the various studies it is the part-time students; vocational/technical or business majors; members of ethnic minorities; "older" students (definition varies); women; "special" students; and Protestants who are more prone to dropping out.

Part-time students are leading candidates to become attrition statistics. In a study of 32 California community colleges, 51 percent of the part-time (less than 12 units) students enrolled at the campuses for the first time did not continue into the second semester in comparison with a 21 percent noncontinuation rate for full-time students. The non-persistence rate for daytime students was found to be 30 percent, while the evening student rate was 56 percent; however, part-time/full-time status was a more important source of variance in the rates.

In the California study, sex made a small, albeit statistically significant,

difference with a higher rate reported for women.

While "older" students are often reported as high proportions of attrition statistics due to their differing objectives (more frequently short-term) and patterns of enrollment (often part-time and evening), variety of breakdown by age category between 21 and 35 makes specific prediction of attrition by age difficult. Also, in California full-time students between the ages of 19 and 21 appeared to be discontinuing their enrollment in relatively large numbers after one semester.

While minorities are usually considered high-risk students, a significantly higher persistence rate for Mexican-American than other students was found at a rural, California college with a high Mexican-American enrollment. Percentages of first-year noncontinuation of minority students in the California study were similar to their percentages in the total sample population.

Religious affiliation was found to be related to attrition in a study of junior college women. Proportionally, Protestants were characterized as most likely to drop out; Catholics to persist; and Jews to transfer.

Academic aptitude is a measure one would expect to be associated with student attrition and retention. However, recent community college studies have not contributed much information to promote understanding of the relationship. Analysis of academic achievement factors reveals that it is not only the academically poor students who drops out. Although in the California sample about one-third of the students who completed only one term would have been in academic difficulty had they persisted, 43 percent who discontinued after one term earned GPA's of "B" or better.

Additional factors associated with student attrition are low self-concept of ability, high debilitating anxiety, low internal reinforcement control, and lack of goal and value clarity.

Reasons for Attrition

What are the students' reasons for leaving college (in addition to transfer or goal completion)? Explanations vary. At one college reasons are "for the most part, personal." Another reports that most withdrawals were for stated reasons over which the college had little or no control. Financial problems, full-time employment, and job conflicts are frequently reported. Apparently students are forced to favor financial stability through employment over pursuit of educational goals. One study suggests that no single reason, such as academic difficulty, could be isolated to explain students' reasons for non-return. The same study found "disappointment with program of study" to be a more frequent reason for new students than for continuing students and appears to be one of the few studies to have considered this factor.

In a study focused primarily on attrition at four-year institutions, it is suggested that persistence reflects involvement. The supposed easy access

to community college education is said to be equated with a minimal investment of energy. Consequently, in two-year colleges, dropping out involves minimum disruption of the student's life style.

Recent studies in the ERIC system have not illuminated the effects on attrition/retention of tuition fees charged at some colleges in comparison with no or low-tuition colleges or the impact of selectivity of admissions.

Possible Solutions

What makes a difference? Unfortunately, many documents which report innovative strategies for working with students (instructional methodology or counseling techniques, for example) do not include information regarding the impact of those methods on attrition/retention rates.

Following are some suggestions from the literature regarding methods of reducing attrition and withdrawal. A learning skills center program in the areas of basic math, basic English, accounting, business, and chemistry significantly lowered dropout rates for students who used the services. Modules, audio-tutorials and contracts were three components of an integrated system of instruction at a community based, performance oriented people's college that reduces attrition. In a general biology course, a traditional lecture method combined with evaluation by frequent short quizzes produced the lowest rate of attrition when compared with other methods of instruction and evaluation. Students who enrolled in a remedial (foundations) program were found "to have significantly greater persistence" than those in a control group. One proposed method for reducing course withdrawal was an informational pamphlet describing instructional methods and course requirements.

GENERAL WORKS ON AND DEFINITION OF ATTRITION/RETENTION

Astin, Alexander W. Preventing Students from Dropping Out. San Francisco: Jossey-Bass, 1975.

This study is based on data from the Cooperative Institutional Research Program (CIRP) cohort of 1968 freshmen who were followed up in 1972. Discusses the design of the study; presents detailed definitions of the basic terms dropout, stopout, and persisters; summarizes the then current employment and marital status of dropouts; analyzes student characteristics at time of college entry and combines measures to form an estimate of "dropout-proneness"; examines the impact on persistence of various forms of financial aid, employment, residence, academic achievement, and participation in extracurricular activities; relates persistence to type of college; summarizes implications for categories of decision-makers; and suggests directions for future research on the dropout phenomenon. Includes references.

Moore, Maynard. "Student Attrition in the Open-door Community College: A Working Hypothesis." Community College Social Science Quarterly, 6 (2): 34-38; Summer 1976.

Presents a model of adaptive (in contrast with selective) education based on the systems-dynamic approach to the problem of student attrition. Defines attrition as student's failure to achieve own goals.

Nickens, John. "Community College Dropout Redefined." College and University, 51 (3): 322-329; Spring 1976.

A study of student attrition rates in 15 Florida junior colleges considered students' educational objectives and plans to reach them. Responses show two groups commonly mislabeled dropouts: Those who originally planned to take one or more courses and those who left planning to return. Only two percent were considered legitimate dropouts.

Noel, Lee, and Renter, Lois (Comps.) College Student Retention. An Annotated Bibliography of Recent Dissertations (1970-March 1975). Iowa City, Ia.: American College Testing Program, 1975. 34pp. (ED 121 233)*

This bibliography of recent dissertations (1970 to March 1975) on the subject of attrition and retention of college students is intended to serve as a resource guide for administrators and for research in higher education. The arrangement is by type of institution for which the data were collected (public community colleges, public colleges and universities, private colleges and universities, and others), subdivided by studies of a single institution and by those studies that included data from two or more institutions.

Pantages, Timothy J., and Creedon, Carol F. "Studies of College Attrition: 1950-1975." Review of Educational Research, 48 (1): 49-101; Winter 1978.

Summarizes twenty-five years (1950 to 1975) of research findings regarding student attrition. Includes a methodological critique of college attrition studies; addresses problems in defining "attrition" and "dropout"; presents theoretical models and national rates of attrition; discusses such factors associated with attrition as demographic, academic, motivational, personality, college environment, financial, and health; reviews student reports of reasons for withdrawal; describes the withdrawal procedure; and reports on programs to reduce attrition. Includes bibliography.

Tinto, Vincent. "Dropout from Higher Education: A Theoretical Synthesis of Recent Research." Review of Educational Research, 45 (1): 89-125; Winter 1975.

A theoretical model is attempted that explains the processes of interaction between the individual and the institution that lead differing individuals to drop out from the institutions. Recent research in the field is also reviewed to gain new insights into the social process of dropping out from higher education.

FINDINGS FROM THE COLLEGES

Analysis of Persistence after Four Semesters, Fall 1975 Entering Students. Student Flow Project, Report No. 28. Honolulu: University of Hawaii, Community College System, October 1977. 63pp. (ED 144 671)*

The Hawaii Community College System conducted a follow-up study of the 8,979 students who enrolled for the first time in fall 1975, to determine persistence rates and to ascertain the characteristics of graduates, persisters, non-persisters, and stop-outs. Those who had attended four continuous semesters and had graduated, were designated "graduates." "Persisters" were those who had attended four continuous semesters, but had not graduated. "Stop-outs" were those who had attended more than one semester, but not all four. And "non-persisters" were those who had attended one semester only. At the end of spring 1977, 8.4% were graduates, 30.9% were persisters, 35.2% were classified as stop-outs, and 25.4% were non-persisters. In general, graduates had attended Neighbor Island public high schools, were full-time students with 3.5+ GPA's, and were working for certificates in health or technology programs. Persisters tended to be less than 19 years old at entry, had attended Oahu public high schools, were full-time students working for the Associate of Science degree, were enrolled in

business or hotel/food services, and had GPA's ranging from 2.0 to 2.9. Non-persisters were usually 22 to 24 years old, graduates of Mainland or territorial high schools, and were transfers, part-time, and/or unclassified students with GPA's below 2.0 who completed less than half their attempted credits. Stop-outs and the three categories already described are analyzed by campus and program and by student characteristics within programs. Statistical data are appended.

Andersen, Roger C. Allegany Community College Attrition Study: Fall Semester, 1975--Spring Semester, 1976. Cumberland, Md.: Allegany Community College, May 1976. 42pp. (ED 122 878)*

Of 1,629 students enrolled in the fall semester of 1975 at Allegany Community College, 340 (20.9 percent) did not re-register for spring 1976. Although the fall enrollment contained almost twice as many full-time as part-time students, more than half of the non-returning students were part-time. Attrition also correlated to age of the students, grade point average (GPA), and whether the students had been classified as "special" students during the fall semester. In spring 1976, survey instruments were mailed to all non-returning students, except those 58 who had been suspended for academic reasons. A total of 178 former students (63.3 percent) responded to this survey, which asked the student's reason for discontinuing his enrollment. Twelve percent of the respondents said that they did not return because they had graduated. Each of the reasons "financial problems," "entered job market," and "achieved educational goals" were cited by 11.1 percent of the respondents; 9.2 percent had transferred to a four-year institution. About 20 percent of the respondents cited reasons unique to themselves, and not among the 10 choices on the survey instrument. Survey responses are correlated to sex, age, course load, GPA, and curriculum. Complete data are presented in tabular form, and the survey instrument is appended.

Gell, Robert L., and Others. A Four Year Follow-up of Non-returning Students at Montgomery College. Rockville, Md.: Montgomery College, Office of Institutional Research, 1975. 59pp. (ED 115 358)*

An annual survey of non-returning Montgomery College students from the years 1971 to 1973 was conducted in order to examine reasons for choosing to leave the college, identify trends, determine the status of students at the time of the survey, and assess the impact of their college experience on current activities. The 454 usable responses (20 percent) were weighted to compensate for the sampling technique. Adding the 550 students who participated in a similar 1970 study, which provided baseline data, the weighted total of the four-year study population comes to 1,904 students. About half of the non-graduates who transferred enrolled at the University of Maryland. Nearly two-thirds of the transfer students changed majors in the process. With 59 percent of them losing some of their credits. Over the four-year span, fewer non-graduates seemed to be continuing their education, and more of them were employed, mostly in health-related, secretarial, or computer-related occupations. About half of the students felt that

their course work was related to their present jobs. Reasons for leaving Montgomery College were, for the most part, personal, with nearly one-fourth having some intention of returning. Attitudes toward the instruction received at the college were very favorable overall. Data are organized in 22 tables and 5 figures, and the questionnaire is appended.

Hall, Toni L. El Paso Community College Attrition Studies, Fall 1971-Fall 1974. El Paso, Tex.: El Paso Community College, 1975. 47pp. (ED 110 114--Available in microfiche only.)*

Four annual attrition studies prepared at El Paso Community College are collected in this document. Each year, a similar followup survey was sent to students who had enrolled in the fall but failed to return for the spring semesters. In all four studies, the major reasons given for leaving college were financial difficulties, transfer to another college, and insufficient time for both work and study. Consistently, a majority of students claimed they intended to return to college at another time. For 1973 and 1974, the attrition study was supplemented with specific demographic information so that attrition patterns among sex, age, and racial groups could be determined. The nonreturning student was found to be a vocational/technical or business major, a "freshman" in terms of credits accrued, a member of an ethnic minority, and falling within the 21-35 age group.

Hinrichsen, Keith A., and Schaumberg, Gary F. The "Dropout": A Look into the Historical Evolution of a Long-standing Implied Policy at Cerritos College, California. Unpublished paper, June 1976. 44pp. (ED 129 361)*

Fluctuations in financial and enrollment conditions have caused the faculty at Cerritos College (California) to be periodically subjected to intense pressure and to be held responsible for high student withdrawal rates, alternating with periods of administrative indifference. Concomitantly, college policy on non-punitive student course withdrawal has been either rigid or liberal. This study sought to determine if a defined policy on acceptable retention and withdrawal rates should be instituted, in light of data received from students about their reasons for withdrawing from college. Questionnaires were mailed to 3,866 students who had withdrawn in fall 1974; 965 (25%) were returned. Results indicated that employment necessities, financial problems, and job conflicts were the major determinants of withdrawal. Personal and health problems were also major factors. A great deal of variation in reasons for withdrawal was found, and in many cases the interaction of several factors was responsible. It was also found that 34% of those who had withdrawn re-enrolled the following spring, and that only 10% did not plan on enrolling in the future. No formal policy on student withdrawal was suggested based on the findings, but written guidelines relating to withdrawal were recommended for counseling and instructional staff.

Jackson, Edison O., and McMillan, Robert L. Study of Attrition: Non-returning Students for 1975-1976. Newark, N.J.: Essex County College, 1976. 44pp. (ED 136 861)*

In order to determine the extent of attrition at Essex County College, all students registered for the fall semester of 1975 who did not return for the winter semester were identified and were surveyed by mail (N=2,000) to ascertain their reasons for not returning. A total of 546 questionnaires were returned for a response rate of 27.3%. Analysis of the resultant data showed: (1) the overall attrition rate was 33.4%; (2) new students who did not return most often cited family problems, disappointment with program of study, financial reasons and illness, in that order, as reasons for non-return, while continuing students most often cited illness, financial problems, family problems, and disappointment with program of study, in that order, as reasons for their non-return; and (3) overall, no single reason such as academic difficulty could be isolated as a cause of attrition. Additional data analyses were performed examining the non-returning students according to their educational objectives, curriculum, academic status, future educational plans, number of credits attempted, level of education completed, and several attitudinal variables. Grade point averages of new students were analyzed against scores on the Comparative Guidance and Placement Test. Overall, the findings indicated a greater tendency for younger students in general and Black students in particular to become attrition statistics after the first year of college.

Kessman, Maurice. Survey of Former Loop College Students; How 1,081 Former Students View Loop College. Student Follow-up Research Project. Report 73-472. Chicago: Chicago City Colleges, Loop College, October 1975. 91pp. (ED 118 180)*

Of the 10,402 students enrolled at Loop College (Chicago) in fall 1972, 4,529 did not return in spring 1973. In October 1973, a questionnaire was sent to all of the nonreturning students. Non-returning students were divided into two categories: (1) 274, or 3 percent of the total enrollment, did not return because they graduated; (2) 4,255, or 41 percent of the total enrollment, did not graduate and did not return. By July 1974, 139 (51 percent) of the graduates, and 942 (22 percent) of the nongraduate had responded, a 24 percent response rate overall. This study presents detailed analyses of student responses in 27 tables, 9 diagrams, 6 appendices, and 6 supplements. Some of the conclusions derived from the data include: (1) Almost two-thirds of the students thought they had achieved their stated purpose at Loop. (2) About two-thirds of those in attendance at other schools said that they were adequately prepared at Loop. (3) Approximately 24 percent of the employed students said they received preparation at Loop for their present jobs, and 26 percent of the unemployed were looking for a job for which they received preparation at Loop. (4) Nearly 76 percent were satisfied with the quality of education at Loop. (5) Most withdrawals were for stated reasons over which the college had little or no control.

Knoell, Dorothy, and Others. Through the Open Door: A Study of Patterns of Enrollment and Performance in California's Community Colleges. Report 76-1. Sacramento: California State Postsecondary Education Commission, February 1976. 82pp. (ED 119 752)*

This final report summarizes a longitudinal study of 32,245 students enrolled for credit and new to 32 California community colleges during the fall quarter of 1972. Patterns of enrollment for six semesters are analyzed by a number of criteria: Age at the time of community college entrance, sex, part-time versus full-time status, and freshman versus transfer admission. At the end of six semesters, 32 percent of the sample has persisted two or more continuous semesters, 6 percent had enrolled for more than one term but did not persist in continuous attendance, and 35 percent had enrolled for only the first term during the 3-year period studied. A followup study of a sample of the students who had been enrolled for only one term is reported, and the cumulative records of grades earned by students are analyzed. A section of findings about the extent to which the California community college system is fulfilling its purposes and achieving its objectives is included, and a number of recommendations concerning community college function, student accounting, grading, reporting and analysis of student data, faculty development, and policy-making are made. Data are organized into 19 tables, and a list of participating institutions is appended.

Lightfield, E. Timothy. "They Do Come Back! Another View of Student Attrition." Community College Frontiers, 3 (3): 45-49; Spring 1975.

The results of a computerized tracking system and followup studies of nonreturning students indicate that the nonreturning student statistic at Mercer County Community College (New Jersey) has been due to intermittent enrollment, changes in personal plans, and completion of individual student objectives, rather than to the failure of the student or the college.

Medsker, Linda L. College of Alameda Student Follow-up Study: First-time Students, Fall 1970, Fall 1971. Alameda, Ca.: College of Alameda, May 1976. 73pp. (ED 128 060)*

This report presents the findings of the first comprehensive follow-up study of former College of Alameda (COA) students. Objectives of the study were to establish a demographic data base on students who first enrolled in the fall quarter of 1970 and in the fall quarter of 1971, to identify their educational objectives at time of entry, to obtain student evaluation of the college's instructional and support services, and to determine what happened to students after they left the college. Questionnaires were mailed to 2,765 randomly selected members (25%) of the study populations. Response rates were 17.49% and 15.92% respectively for the 1970 and 1971 subgroups. Results indicated that, at time of enrollment, a "typical" student was a full-time

day student, a Caucasian male between 16 and 18 years of age, single, not a veteran, with a high school diploma or GED, and no previous college work. Almost half of the respondents originally planned to transfer to a four-year college, one-third enrolled to take courses for enjoyment, and only 13.8% and 16.2% respectively intended to complete a vocational-technical program. One-third of the respondents stated they did not meet their objective. At least 60% of the 1970 and 1971 enrollees withdrew at some point prior to completing their objective, although one-third later re-enrolled. Several recommendations based on the study findings are made, and the survey instrument and student comments are appended.

Stine, Vance. Some Characteristics of Students who Withdrew from L.A.C.C. Spring 1975, Spring 1974, and Spring 1973. Research Study No. 76-2. Los Angeles: Los Angeles City College, February 1976. 17pp. (ED 118 200)*

This study examines the responses of the 1,474 students who withdraw from Los Angeles City College during the spring semesters of 1973, 1974, and 1975, and who completed the exit questionnaire. In spring 1975, 65 percent of the withdrawees were of non-Caucasian background, and 46 percent were male. About 40 percent of the males, and 20 percent of the females were in their first semester; and about 15 percent of the males, and 25 percent of the females were in their fourth semester or later. About 48 percent of the withdrawees had not been employed during the spring 1975 semester. Only about 26 percent were employed full-time. About 40 percent of the spring 1975 withdrawees indicated that they planned to transfer to a four-year college; 25 percent said they did not intend to transfer; and 33 percent were not sure. These proportions have been about the same for the last four years. Corresponding figures for the entire student body were 69 percent, 11 percent, and 19 percent respectively. About 97 percent of the withdrawees felt that they were adequately served by the college, and about half expected to return. The most often stated reason for withdrawal was going to work full-time, followed by personal problems. Data are organized into tables, and the withdrawal questionnaire is appended.

Through the Open Door: A Study of Persistence and Performance in California's Community Colleges. Report 3: The Other Side of Persistence. Sacramento: California State Coordinating Council for Higher Education, February 1974. 19pp. (ED 121 393)*

This report, part three of a long-range study of persistence and performance in California's community colleges, presents rates of non-persistence for the sample of 35,000 students during 1972-73, their first year of enrollment. About 18 percent of the new students enrolled for credit withdrew from all classes before the end of the fall term. An additional 22 percent completed the first term, but did

not continue into the spring term. Only 8 percent of the students who persisted into the spring term withdrew from all classes before the end of their first year. About 20 percent of the fall withdrawals reenrolled in the spring, and one-third of these withdrew a second time. Full-time students exhibited significantly higher rates of persistence to the end of the term than part-time students. Students with prior experience at another institution displayed somewhat lower rates of persistence than first-time students, as did the women in the sample, compared to men. The representation of minority students in the groups of non-persisters was about equal to their representation in the total sample. A large portion of the students completing only one term were fairly successful academically, as measured by grades, particularly students with prior college attendance. Four tables of data are presented.

Wetzel, Susan. Non-returning Student Survey, Winter 1976-Fall 1976. [Parts I and II]. Media, Penn.: Delaware County Community College, April 1977. 156pp. (ED 145 906)*

In order to determine (1) characteristics of non-returning students, (2) reasons for attrition, and (3) student evaluation of Delaware County Community College (DCCC), questionnaires were mailed to all full- and part-time students who attended the winter 1976 term but who did not register for the fall 1976 term. Drawn from 405 responses, characteristics of the survey population included the following: 89.6% were Caucasian; 17.1% were veterans; 34% had not matriculated; 58.8% were working toward an Associate Degree; 70.5% had withdrawn at least 7-12 months prior to the study; 57.8% had been part-time students; 42.7% were employed 36 or more hours weekly; 69.5% received no financial aid; and 90.1% had never been on academic probation. Major reasons for leaving DCCC were transfer to another institution (22.4%), home or work obligations (12.2%), financial problems (10.2%), and moving from the area (9.1%). Asked to choose three factors which, if changed for the better, would encourage respondents to stay at DCCC, the scheduling of classes, course content in major fields, and counseling/guidance services were ranked highest. The majority of respondents expressed satisfaction with their experiences at DCCC and expected to return at some future date. In addition to the narrative summation, response data are presented in graph form for each questionnaire item.

PROGRAMS AND METHODS OF REDUCING ATTRITION

Aarons, Howell. An Evaluation of an Individualized Interpersonal and Interdisciplinary Team Approach to Remediation at Mohegan Community College. Unpublished paper, 1975. 99pp. (ED 115 341--Available in microfiche only.)*

In order to assess the effects of the remedial (foundations) program at Mohegan Community College (Connecticut) on students' academic

performance and persistence in college, a study was made of 180 students who had enrolled in the foundations program between September 1971 and 1974, and 180 students who had scored below the 50th percentile on the comparative guidance and placement test but had not enrolled in the program. Students in the control group were chosen by the matched pair technique; scores of enrolled students were sifted for scores equal to those of students in the treatment group. Then, one score was randomly selected for each score in the treatment group. Using the records in the Office of the Registrar, transcripts of all subjects were examined and a variety of data were collected. Students in the foundation program were found to have significantly greater persistence than those in the control group. Students in the treatment group who persisted for a set period of time had higher quality point averages (QPA's) than classmates not enrolled in the program. Whether a student volunteered for the program or was pressured to enroll, his level of persistence was likely to be about the same. A survey of the literature is included and a bibliography is appended.

Belzer, Thomas J. A Comparative Study of a Traditional Lecture Method and a Group-paced Multimedia, Non-lecture Method Used in Teaching College Biology. Unpublished paper, 1976. 18pp. (ED 133 026)*

A study was conducted to test and compare the effects of a group-paced, multimedia, non-lecture method and a traditional lecture method of instruction in general biology, and to determine if the type of evaluation used influenced a student's chances of successfully completing the course during the 1975-76 school year at Pasadena City College (California). Subjects were 308 students enrolling in general biology. Experimental classes (N=152) received instruction via audio-visual materials while the control classes (N=156) were taught by lecture. Students in both experimental and control classes were evaluated using the same test items; however, these questions were organized into three separate examinations during one semester and into ten quizzes during a second semester. Analysis of student achievement and attrition revealed: (1) the traditional method produced greater academic success than did the multimedia approach; (2) short quizzes for evaluation improved the student's chances of completing the course and earning the most points regardless of method of instruction; (3) short quizzes were preferred by students over block tests; and (4) overall, the lecture/quiz combination of instruction and evaluation produced the highest degree of academic success and the lowest rate of attrition. Tabular data are presented throughout the report.

Cohen-Benjamin, Barbara, and Olson, Gerald T. Evaluating and Auditing a Community College Learning Skills Center Program: Second Year. Los Angeles: Los Angeles City College, May 1977. 16pp. (ED 138 331)*

An Evaluation of Los Angeles City College's Learning Skills Center (LSC) was conducted in order to ascertain the nature of the LSC's

outcomes. The LSC offers students an opportunity to participate in diagnostic and prescriptive open-entry open-exit programs in an individualized setting. Types of programs available through the LSC include communication skills, quantitative skills, and tutoring in other college-level courses. The evaluation of the LSC considered three specific areas: the first consisted of analyses of data gathered in relation to specific program objectives, the second examined unexpected spinoffs, and the third considered the humanistic characteristics of the LSC. Results of the evaluation indicated: (1) students who utilized the LSC's services in the areas of basic math, basic English, accounting, business, and chemistry were associated with significantly lower dropout rates than were students who enrolled in these courses but did not utilize the LSC; (2) the LSC had gained the support of the academic senate and a number of departments traditionally opposed to remedial courses; and (3) numerous students who had used the LSC offered favorable personal evaluations of the center. A critique of the causal-comparative method employed in the study is included.

Parsons, Michael H. "MATC Spells Instruction." New Directions for Community Colleges, 3 (1): 17-23; Spring 1975.

Modules, audio-tutorials, and contracts are the three components of an integrated system of instruction which has transformed a traditional junior college into a community-based, performance-oriented people's college. This method individualized instruction, reduces attrition, and virtually eliminates "D" and "F" grades at Hagerstown Junior College, Maryland.

Reimanis, Gunars. Student Attrition and Program Effectiveness. Paper presented at the Annual Forum of the Association for Institutional Research, Vancouver, British Columbia, 1973. 12pp. (ED 132 988--Available in microfiche only.)*

This paper reports the effectiveness of seven different programs at Corning Community College (New York) designed to influence those factors associated with student attrition--low self concept of ability, high debilitating anxiety, low internal reinforcement control, and lack of goal and value clarity. The underlying theme of each of the programs has been to help students understand that the college faculty and administration are genuinely interested in the personal as well as academic growth of the student and know that incoming students may not have clear values or goals, and that it is natural for students to be apprehensive about things they are not familiar with. The programs include weekly "rap" sessions for Economic Opportunity Program students, a short-course in achievement motivation training, locus of control counseling, an Early Orientation Program for students with undecided educational goals, training in affective/confluent education principles for technical career faculty, an in-service faculty program to facilitate student-centered classrooms, group counseling for high anxiety nursing students, and encounter groups to improve student self concept. Evaluation data for program participants and controls show that these efforts

in improving student performance and reducing attrition have been more effective than purely "remedial" programs in academic areas.

Rosella, John D. Effects of the Basic Studies Program on the Scholastic Performance of a Selected Group of Low-achieving Students Enrolled at Bucks County Community College during the 1973-1974 Academic Year. Newton, Penn.: Bucks County Community College, February 1975. 15pp. (ED 119 794)*

Bucks County Community College's Department of Basic Studies is a comprehensive developmental education program which involves work for credit in basic academic skills--reading and study skills, writing and mathematics. In addition, special counseling is given to students in order to change negative habits and attitudes, and to develop a more positive self-image. During the 1973-74 academic year, a study was conducted to determine the effect of the basic studies program. Students included in the study ranked in the bottom 40 percent of their high school graduating class and scored at the 25th percentile or below on the Comparative Guidance and Placement Test. This study contrasts 86 students participating in the basic studies program (experimental group) with 97 nonparticipants (control group). The average GPA earned by the experimental group was 2.285, while the control group earned an average GPA of 1.77, a difference which was statistically significant. While 75 (87 percent) of the experimental group participants returned to Bucks for the fall 1974 semester, only 59 (61 percent) of the control group returned. The experimental group also proved to be more successful in English Composition I and mathematics than the control group. They more frequently earned grades of "C" or better, and showed more persistence. Tables of data are appended.

SPECIAL GROUPS OF STUDENTS AND ATTRITION

Mexican-Americans

Clark, Robert M. Reedley College Enrollment/Withdrawal Survey, 1974-1975. Reedley, Ca.: Reedley College, November 1975. 9pp. (ED 128 055)*

This paper provides a brief analysis of enrollment and withdrawal data for Mexican-American and non-Mexican-American students at Reedley College. The study was conducted subsequent to an expressed concern that perhaps the college could do more toward recruitment and retention of minority students. Results of an analysis of enrollment and withdrawal data indicated that Mexican-Americans comprised 46.9% of local high school students in fall 1974 but only 30.2% of Reedley students. However, while approximately 8% of non-Mexican-American students withdrew from Reedley in both fall 1974 and spring 1975, only 5% of the Mexican-American students withdrew. Reasons for withdrawal (financial, needed at home,

work vs. college) were compared across both groups with no significant differences found. The significantly greater persistence of Mexican-American students is attributed to a combination of effective recruiting, peer advising, financial aid, and other support services provided these students. It is recommended that efforts should continue to reduce all withdrawals, regardless of ethnic origin. Data used in this study and subsequent results of analysis are presented in six tables.

Reverse Transfer Students

Gragg, William L., and Stroud, Patricia M. "Do Community Colleges Help Salvage Late-bloomers?" Community College Review, 4 (3): 37-41; Winter 1977.

This report presents the characteristics of students who failed in their first four-year college attempt, then transferred into community colleges, and subsequently moved on to a four-year college and succeeded. While the numbers who moved on through each stage dropped, they were large enough to identify recovery as a valuable community college function.

Lee, Glenda E. Reverse Transfer: The "Retread Function" of Community Colleges. Paper presented at the Annual Meeting of the American Educational Research Association, Washington, D.C., March 30-April 3, 1975. 46pp. (ED 104 471)*

Student characteristics and educational destinations of all the reverse transfer students from five state universities who were admitted to five community colleges during one calendar year (N=459) were studied to re-assess and define the "retread function" of community colleges. A group of 245 native community college students were randomly selected for comparison purposes. The reverse transfer students were found to be very much like the native community college students in most characteristics. They did have slightly higher high school grade point averages and slightly higher scores on college entrance examinations. However, no larger percentage of them remained in college to complete an educational program, fewer of them enrolled in two-year occupational programs, and about the same number returned to the four-year college as entered for the first time from a community college. Recommendations are made for dealing with the unique problems of the reverse transfer student in the areas of re-admission procedures, counseling, academic reinforcement, and inter-school communications. It is the author's view that the community colleges have failed to effectively perform their "retread function;" in fact there is some doubt whether community colleges recognize the "retread function" as part of their institutional mission.

Women

Nichols, Irene A., and Shauffer, Carole B. Self Concept as a Predictor of Performance in College Women. Paper presented at the 83rd Annual Convention of the American Psychological Association, Washington, D.C., March 22-23, 1975. 35pp. (ED 124 865)*

This study examined the relationship between self-concept and two measures of academic performance, achievement and attrition. The Tennessee Self Concept Scale (TSCS) was administered to 158 female junior college freshmen. Data were collected on achievement (GPA), attrition (drop nontransfers, transfers, persisters), academic ability (SAT), and personal characteristics. Regression analysis indicated a slight, nonsignificant relationship between TSCS scores and GPA. Combining SAT scores with TSCS scores producing a stronger, statistically significant relationship. Results of two one-way analyses of variance indicated that although transfers had significantly higher self-criticism scores than did persisters and dropouts, the three groups did not differ significantly on mean overall self-concept scores. Finally, chi-square analyses showed that students with working mothers had higher GPAs than those whose mothers were housewives and that religious affiliation related to attrition. Proportionally, Protestants were most likely to drop out; Catholics to persist; and Jews to transfer, the results provide ambiguous evidence for a relationship between self-concept and college performance and suggest that other nonacademic variables may be better predictors of achievement and attrition.

Veterans

Weiss, Janis H. The Veteran at North Hennepin Community College: 1972-1974. Minneapolis: North Hennepin Community College, June 1976. 9pp. (ED 129 369)*

The academic progress of veteran students has delighted some and been a source of consternation to others. Three points of view seem most common: Veterans do more poorly than other students; veterans do better than other students; and, veterans do not differ from other students. This study investigated the academic achievement of veterans at North Hennepin Community College. All veterans who had enrolled during the academic years 1972-73 through 1974-75 were included in the study. A record was made of credits, honor points, credit hours of non-credit-bearing grades, age, and graduation status. Veterans were found to account for about 18% of the total yearly headcount of students and about 18% of the total credit hour generation. No significant differences were found between veterans and non-veterans in average credit hour loads, grade point averages, or credit-course completion rates. In the three years studied, 70% of the veteran students persisted through all three quarters, a persistence rate felt to be not less than that of non-veteran students. The most compelling conclusion is that veterans do not differ from non-veterans in terms of academic achievement.

Daly, Robert F., and Bateman, Harold H. "The Grade W: Why Students Drop their Classes." Community/Junior College Research Quarterly, 2, (4): 353-366; July-September 1978.

This study reports reasons given by community college students as to why they drop their classes and totally withdraw from college. In addition, the report gives findings as to whether or not students have a propensity for adding another class after they drop a class, and relates students' reasons for dropping a class to several student characteristics. Analysis of the data reveals that a majority of students drop classes for reasons not related to the college's instructional program.

Durham, J.A. A Comparison on Race/Ethnic Categories by Hours of Enrollment and Course Completions for Fall Semester 1975. Niceville, Fla.: Okaloosa-Walton Junior College, February 1976. 9pp. (ED 119 753)*

This study was designed to test the hypothesis that there is no significant difference between the academic achievement of Black students and students of other races at Okaloosa-Walton Junior College (OWJC) in terms of (1) hours of enrollment, (2) course withdrawals, (3) course failures, and (4) overall course completions. The subjects of this study consisted of all credit and noncredit students enrolled at OWJC during fall 1975 who had not been admitted exclusively for enrichment (avocational) courses or for "other personal reasons" (teacher certification or other reasons not related to a specific catalog program or activity). The fall 1975 nonavocational enrollment was 4,014 students--88.7 percent were white, 7.6 percent were Black, and 3.7 percent were other minorities. No significant differences were found between Black students and other students in terms of hours of enrollment and rate of withdrawal. However, Blacks were found to have a significantly higher failure rate (17.3 percent, as compared to 7.6 percent for white students and 8.3 percent for others) and a significantly lower record of course completions (62.5 percent, as compared to 78.1 percent for white students and 79.8 percent for others). Recommendations to solve this problem are made.

Jones, Dean H. A Proposal for a Compilation of Requirements and Teaching Methods of Courses at Gaston College. Unpublished paper, April 1975. 25pp. (ED 105 924)*

The purpose of this practicum was to determine the response of faculty members and students to the possibility of producing a pamphlet listing instructional methodologies and course requirements for classes at Gaston College (North Carolina). A questionnaire was completed by twenty-five instructors and twenty-five students, and additional

information was acquired through several personal interviews. The results showed overwhelming support for the proposal from the students, whereas faculty were almost evenly divided in their views. Faculty objections to the proposal included: (1) it would limit academic freedom; (2) it would result in instructional inflexibility; (3) students would avoid certain instructors; (4) students would be exposed to a limited variety of instructional methodologies; (5) it would create extra work for teachers; and (6) instructors would be unfairly labeled. Both students and instructors agreed that the pamphlet would affect class enrollments and reduce student withdrawals, especially early withdrawals. Based on the results of the questionnaire, personal interviews, and related literature, the author recommends development of the instructional methods and course requirements pamphlet. A format for the pamphlet is presented.

Larkin, Paul G. How Many Students Are We Losing? Attrition and Inefficiency in Instructional Operations Re-examined. Report No. 77-11. Largo, Md.: Prince George's Community College, March 1977. 30pp. (ED 143 380)*

In this study of student attrition rates at Prince George's Community College, three indicators were analyzed: (1) term-to-term attrition, (2) within-term attrition, and (3) course "inefficiency" (failure). Data from 1972-73 through 1976-77 indicated that fall to spring attrition (term-to-term) was approximately 34%. Spring to fall averaged 47%, with graduation, successful transfers, and returns of stopouts tending to reduce this to 20%. Within-term withdrawals averaged 8% from 1971 to 1976, with 28% reporting work conflict as their withdrawal reason in 1976. Although course withdrawals decreased when non-punitive grading practices were established in 1974, highs reported in 1976 included 26% in chemistry, 18% in physics, and 17% each in engineering, political science, and psychology, compared with a college-wide average of 12%. Students not passing the course (course inefficiency) averaged 27% with higher failure rates in developmental studies, English, science-math, social sciences, and business technology. Early warning notices in fall 1976, did not change retention rates. Recommendations included allowing students to drop courses and petition for full or partial credit, based on course objectives being met; developing a student contract system; using continuing education units; and training faculty to identify student objectives. Attrition and grade data and a summary analysis of the spring semester 1977, are appended.

A Study of the "Withdrawal Syndrome" at RSCC (Roane State Community College, Tennessee). Harriman, Tenn.: Roane State Community College, January 1975. 6pp. (ED 099 086)*

Since the number of students taking advantage of Roane State Community College's policy of allowing withdrawal from courses ("W" grade) up to the last day of class has increased from 14 percent of all grades given in fall 1972 to 23 percent of all grades given in fall 1974,

an effort was made to determine some of the factors involved in the "withdrawal syndrome." All students who dropped one or more classes during spring quarter 1974 were requested to complete a special form which listed 15 possible reasons for withdrawal. The one reason chosen most often (28 percent) seemed to be scheduling conflicts with work, other classes, or other duties. The second ranking category included a series of academic reasons; 19 percent said they were making less than a passing grade. The third major reason was the cancellation or splitting of classes. The distribution of withdrawals over the quarter was skewed at the extremes, with 78 percent of all drops occurring during either the first or last weeks. The data indicated that the grade "W" is probably not misused by the students nor reserved only to the failing student.

Sutton, Lawrence S. Analysis of Withdrawal Rates of Students Receiving Financial Aid at Central Florida Community College. Unpublished paper, December 1975. 34pp. (ED 130 700)*

The purpose of this study was to determine if students enrolled at Central Florida Community College (CFCC) who receive financial aid withdraw from college credit classes at a significantly higher rate than those not receiving such aid. A secondary purpose was to determine if GI Bill recipients withdraw at a significantly higher rate than other students receiving financial aid. Using institutionally collected and maintained computerized student data, withdrawal rates for 1974-75 academic year at CFCC were analyzed. Data tabulations were compiled for all students, financial aid recipients, and GI Bill recipients. The Z-test statistical technique was used in the comparative analysis of withdrawal rates. Results of the analysis revealed that there were no significant differences in the withdrawal rates of financial aid recipients and non-financial aid recipients, and that GI Bill recipients did not exhibit a significantly higher withdrawal rate than other financial aid recipients. It is recommended that other community colleges perform similar studies so that an adequate empirical data base, upon which policy and planning decisions could be based, might be established.

METHODOLOGY AND USE OF FOLLOW-UP STUDIES

Becker, William J. Occupational Program Evaluation Model Developed and Implemented by Gateway Technical Institute, Kenosha, Wisconsin. Paper presented at the 56th Annual Meeting of the American Association of Community and Junior Colleges, Washington, D.C., March 17-19, 1976. 14pp. (ED 122 898)*

A screening mechanism using objective data was developed to determine which of the nearly 60 different associate degree and diploma occupational programs offered by Gateway Technical Institute should be subjected to in-depth evaluation and at what frequency the evaluation should be conducted. Four factors for which objective data were available

were chosen as indicators of program effectiveness. The factors are: (1) ability of a program to attract students--increase, stability, or decrease in program enrollments; (2) ability of a program to retain students--percent of students enrolled, to students completing a program, averaged over a 3-year period; (3) ability of a program to place students in positions for which they have been trained--average percent of desirable placements over a 3-year period; (4) program costs, calculated per student. This four-factor evaluation model is applied annually to all occupational programs; programs having below average indices on three or four factors are automatically selected for a further in-depth evaluation; programs below average on one or two factors are considered for in-depth evaluation. Appendices provide sample calculations for each of the four factors.

Capoor, Madan, and Eagle, Norman. Dropouts in the Two-Year Colleges: Better Prediction with the Use of Moderator Subgroups. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, California, April 19-23, 1976. 22pp. (ED 122 874)*

Failure to identify and account for the effect of moderator variables is an important reason for the low explanatory power of much educational research. Pre-existing subgroups such as sex, ethnicity, and curriculum offer an easily identifiable and theoretically meaningful source of moderator variables. Tests for intercept and slope differences in a multiple regression analysis offer a convenient and reliable way to test the significance of these moderator variables. Using this improved statistical methodology, this paper analyzes data on 32 cognitive and non-cognitive variables collected on the Bronx Community College freshman class at the time of their entry in fall 1972. The 32 variables include measures of personality, family background, attitudes, aspirations, and academic ability. At the end of one year, the 984 sampled students were classified as dropouts or persisters, and the variables were examined to determine their effectiveness as predictors of persistence. The categories of sex, ethnicity, and curriculum were selected to test for their moderating effect. Complete statistical data are included, as are separate tables listing significant predictor variables for the 12 curriculum sub-populations. Definitions of the predictor variables are appended.

Coffey, Daniel J. Attrition/Retention Study, Central YMCA Community College. Chicago: Coffey Associates, March 1976. 88pp. (ED 125 674)*

In order to determine what Central YMCA Community College can do to reduce student dropout rates, a series of questionnaires was developed and SRS information system data were analyzed for fall 1975. One questionnaire collected information from faculty on student attrition through the first eight weeks of the fall 1975 semester to find out what kinds of students dropped out, and when. Two questionnaires were

administered to systematic samples of students and faculty to determine what student services were valuable in holding students. A registrar deficiency study provided information on how many and what types of students dropped out during the first week of classes, while SRS data gave "time delay" information on dropouts (comparisons for several weeks). The complementary insights provided by these various sources of information led to the following conclusions: (1) over 30% of the student population can be identified at the end of registration as likely dropouts; (2) the highest dropout rate occurs in the first week of class; (3) instructors are providing ingredients critical to helping students succeed; (4) counselors provide services only on request; and (5) SRS data are out of touch with student enrollments from the point of registration until grades are assigned. On the basis of these conclusions the development of an early intervention model is recommended.

Lightfield, E. Timothy. Student Follow-up in Higher Education: A Systematic Approach. Advanced Institutional Development Program (AIDP) Two-Year College Consortium, Vol. II, No. 6. Washington, D.C.: McManis Associates, December 1976. 86pp. (ED 134 276)*

This manual, developed by Mercer County Community College (MCCC), prescribes a step-by-step, systematic approach for conducting student follow-up surveys. As data are required from both students who graduate from the institution and from students who are classified as non-returning, follow-up procedures are listed for each separately. Types of demographic and biographic data that should be collected in both cases are also listed. Methods of tabulating the resultant survey data are suggested, as are appropriate procedures for reporting and disseminating the survey results. Appended to this publication are sample graduated student survey forms, sample non-returning student survey forms, supplementary items for the graduated student survey, and sample output of the MCCC tabulation program. It is suggested that institutions wishing to use the methods described in this manual make no modifications of the survey forms. Rather, where additional information is required, a supplemental item survey should be devised and used with the prescribed forms.

Reed, Jim F., and Cox, Jeannene. The Research and Development of a Post-secondary Follow-up Management Information System for Texas (Project FOLLOW-UP). Paper presented at the Annual Forum of the Association for Institutional Research, Los Angeles, California, May 3-6, 1976. 19pp. (ED 128 036)*

This paper reports an overview of Project FOLLOW-UP (the TEX-SIS Follow-up System) whose purpose was to develop, test, and validate a statewide management information system for follow-up of Texas public junior and community college students. The system designed is for use by machine or manual processing and is thus useful to small and large

institutions while interfacing with present state reporting systems and extant Texas community college follow-up systems. It is flexible so that a college can adapt the system to its unique needs in order to obtain consistent information for use in local planning and evaluation. Elements of the system, which can be utilized individually or in combination, include: (1) Student's Educational Intent, (2) Withdrawal Follow-up, (3) Nonreturning Student Follow-up, (4) Graduate Follow-up, (5) Employer Follow-up (6) Adult and Continuing Education Follow-up, and (7) State Follow-up Reporting. Among the characteristics of the system are pretested procedures and instruments for data collection, flexibility, provision of a mechanism for system evaluation, and structure around the concept of an educational management information system. A statewide Delphi technique study was utilized to obtain consensus on needed system characteristics. Procedures of the Delphi study are described, and the system brochure is appended. Related documents reporting TEX-SIS Follow-up System methodology are ED 118 164, 128 037-128 046, and 130 708. Monographs reporting use of the system are also available.

Student Flow Project, Community Colleges. Report No. 1. Honolulu: University of Hawaii, Community College System, December 1975. 4pp. (ED 116 750)*

This brief report outlines the preliminary plans of the University of Hawaii to develop a student flow model for its seven community colleges. This model will indicate the flow of students--progressing through class levels, changing majors, leaving or withdrawing from the institution. It will be used as a basic tool for planning and management systems. Before the model is developed, five reports will be made: (1) a summary of the number of students who apply for admission, the number who are accepted to that campus, and the number who actually register at that campus for the particular semester; (2) a study of the "no-shows," those students accepted by a particular campus who did not register there for the term; (3) a summary of attrition rates, end-of-semester changes (withdrawals and graduates), and changes of majors; (4) a study of the present activities of students who were expected to continue their registration, but who "disappeared" between semesters; and (5) a study of the present activities of graduates and their evaluations of their community college experiences. Analysis will be in terms of the community college system total and each campus. Entering students will be classified as "new to higher education" or transfers, and data by sex and program (liberal arts, vocational education, and other), will be presented. Numerous reports of use of the Hawaii Student-Flow Model have been included in the ERIC system.

Vinarskai, Eugene T., and Others. 1975 Community College Follow-up System: Summary of Findings, Spring 1976. Salem: Oregon State Department of Education, Career and Vocational Education Section, 1976. 30pp. (ED 136 877)*

This report summarizes the procedures and findings of the 1974-75 Oregon Community College follow-up survey of a statewide sample of

community college graduates and early leavers. Data obtained by means of the survey questionnaire were analyzed in aggregate, with no separate analyses conducted for individual colleges. Among the major findings were: (1) one-half of the graduates surveyed were employed full-time while an additional 34% were continuing their education; (2) one-half of the respondents identified as early leavers were continuing their education while an additional one-third were employed full-time; (3) twice as many graduates as early leavers were working in an area related to their community college program; (4) respondents indicated overall satisfaction with the programs and services offered at Oregon community colleges; (5) over one-half of all respondents who were continuing their education were doing so in a state higher education institution; (6) one-fourth of all continuing students were studying at community colleges; (7) average salary for females employed full-time was $510 per month while for males the figure was $630 per month; and (8) lower division transfer students were significantly more likely to continue their education than were vocational students. The survey instrument is appended.